

DESCRIPTION

TITLE

Apparatus for generating electrical energy

TECHNICAL FIELD

The present invention relates to an apparatus with generation of electrical energy, comprising a rotor with at least one coil, a stator with at least one magnet and at least one electrical consumer located on the rotor and connected to the at least one coil.

PRIOR ART

In apparatus with generation of electrical energy, comprising a rotor with at least one coil, a stator with at least one magnet and at least one electrical consumer, the at least one consumer is generally located on the stator side. The electrical energy generated in the rotor is thus transmitted to the fixed part by means of sliding contacts.

Patent Abstracts of Japan Vol. 008, No. 250 (E-279), 16th November 1984 (1984-11-16) and JP 59 1275566 A (Mobuo Kiyokawa) 23rd July 1984 (1984-07-23) disclose an apparatus with generation of electrical energy, comprising a rotor with at least one coil, a stator with at least one magnet and at least one electrical consumer, wherein on the rotor there is located a diode bridge connected to the coil and connected to a further consumer. Where the further consumer is located and of what type it is cannot be inferred from the document.

DE 27 10 148 A (Voith Getriebe KG) 14th September 1978 (1978-09-14) discloses a blade rotor designed as a wind energy converter wherein electrical lights are located on the rotor. These should form a closed advertising

space for the eye when the rotor turns sufficiently rapidly. The thus designed energy converter is provided with a generator which supplies the current for the lights. For further details refer to Lueger, Lexikon der Technik, 1965, Vol. 7, pages 574-581. In this additional literature wind power plants are described where a separate generator with its own rotor is provided in each case in addition to the blade rotor. In this arrangement the current for the lights is transmitted from the generator rotor to the blade rotor.

DESCRIPTION OF THE INVENTION

The invention now proposes an apparatus of the type specified initially, wherein the at least one electrical consumer located on the rotor and there connected to the at least one coil is a light-emitting element and/on a non-luminous signal transmitter.

A particularly interesting and advantageous application of the invention is obtained if the apparatus is designed as a windmill and the rotor is provided with blades. The invention is particularly suited for this application because, as a result of the generation of electrical energy, sliding contacts between the rotor and the stator are dispensed with on the rotor and in addition a low running and starting resistance of the rotor can be achieved which is particularly important for a windmill.

If at least one light-emitting diode (LED) is used as the consumer on the rotor, this will light up as soon as the windmill begins to be turned by the wind. In particular, this can lead to attractive effects when a plurality of differently coloured light-emitting diodes are used on the blades of the windmill.